

Title (en)
Primary aluminum-air battery.

Title (de)
Primäre Aluminium-Luft-Batterie.

Title (fr)
Batterie primaire aluminium-air.

Publication
EP 0391443 A2 19901010 (EN)

Application
EP 90106696 A 19900406

Priority
US 33500589 A 19890407

Abstract (en)
An aqueous electrolyte aluminum-air battery comprises one or more cells (14), each cell comprising a frame (40) which defines an electrolyte chamber (54). The frame (40) is made of a rigid material inactive to the electrolyte. The cell has a consumable aluminum anode (80) and an air cathode (90) spaced from the anode by said electrolyte chamber. Means are provided for admitting electrolyte solution into the electrolyte chamber (54). A vent (64) exposes the electrolyte chamber to atmosphere. A hydrophobic membrane (66) which is impermeable to the passage of electrolyte but permeable to the passage of hydrogen closes the vent. A surface (82) of each cell anode is exposed to the flow of air. The amount of surface exposed is effective to dissipate heat generated at the anode (80). <IMAGE>

IPC 1-7
H01M 2/12; **H01M 4/02**; **H01M 10/50**; **H01M 12/06**

IPC 8 full level
H01M 6/50 (2006.01); **H01M 10/52** (2006.01); **H01M 12/06** (2006.01); **H01M 2/12** (2006.01); **H01M 6/48** (2006.01); **H01M 10/50** (2006.01)

CPC (source: EP US)
H01M 6/50 (2013.01 - EP US); **H01M 10/52** (2013.01 - EP US); **H01M 12/065** (2013.01 - EP US); **H01M 50/394** (2021.01 - EP US); **H01M 6/48** (2013.01 - EP US); **H01M 10/647** (2015.04 - EP US); **H01M 10/6561** (2015.04 - EP US); **Y02E 60/10** (2013.01 - EP)

Cited by
US5506067A; EP0570590A4; CN108028444A; US5501918A; EP0613204A1; US10305070B2; WO9631915A1; WO9429908A3; WO2014118393A1; WO02086984A3

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
US 4925744 A 19900515; AU 5149290 A 19901018; AU 614922 B2 19910912; CA 2012012 A1 19901007; EP 0391443 A2 19901010; EP 0391443 A3 19920226; JP H02295072 A 19901205

DOCDB simple family (application)
US 33500589 A 19890407; AU 5149290 A 19900320; CA 2012012 A 19900313; EP 90106696 A 19900406; JP 9198990 A 19900406